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CCMF Checklist Tool – Demo & Review

Community Capability Model Framework for
Data-Intensive Research – Applying the Model

IDCC 2013, 14th January 2013

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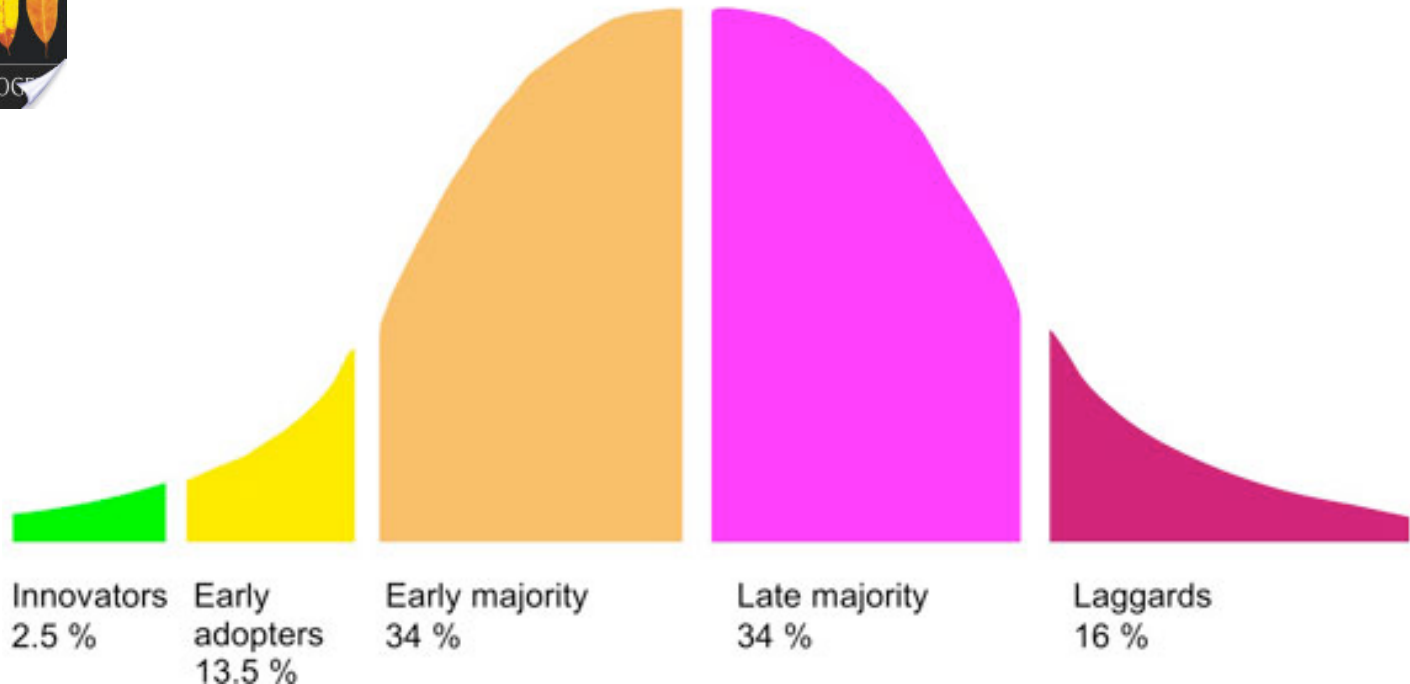
Overview

- Diffusion of Data-Intensive Research (DIR)
- Three Perspectives
 - Funding Agency, Institution, Researcher
- Data-Intensive Research Lifecycle
- CCMF Parameters & DIR Lifecycle Stages
- Demo of CDIR Tool
- Review & Further work
- Feedback from delegates

Diffusion of Data-Intensive Research



Everett M. Rogers, *Diffusion of Innovations*, Fifth Edition 2003, Free Press, New York
http://books.google.co.uk/books/about/Diffusion_of_Innovations_5th_Edition.html?id=9U1K5LjUOwEC



<http://www.neb-one.gc.ca/clf-nsi/rnrgynfmrn/nrgyrprt/nrgdmnd/tttdbhvrshpngnrgs2009/mg/f04-eng.jpg>

Three Perspectives

- **Funding Bodies** (e.g. European Union, UK Research Councils, Trusts, Learned Societies, Companies, Foundations)
 - High level disciplinary, strategic, long-term, outward facing
- **Institutions** (e.g. HEIs, Facilities (e.g. CERN, STFC))
 - Multi-disciplinary, organisational, strategic, long-term, inward facing
- **Researchers** (Principal Investigators)
 - sub-disciplinary, disciplinary, inter-disciplinary

Motivations for Funders

- Deriving maximum research, economic and social benefits from investments
- Robust, reproducible research
- Improved quality and efficiency of research
- Enhanced funder reputation
- Increase in knowledge transfer within discipline; across disciplines; between sectors
- Building of sub-disciplinary, disciplinary and inter-disciplinary communities
- Opportunity to develop added-value services based on corpora of research data

Motivations for Institutions

- Robust, reproducible research
- Improved quality and efficiency of research
- Improved institutional reputation
- Increased ability to attract research funds
- Opportunity to build institutional and cross-institutional communities
- Opportunity to develop added-value services based on corpora of research data
- Inclusion of data citation into research evaluation systems e.g. UK's REF?

Motivations for Researchers

- Opportunities for new and innovative research (sub-disciplinary, disciplinary and inter-disciplinary)
- Improvements in quality of research
- Robust, reproducible research
- Improved citations and reputation
- Career advancement
- Addition of data citation into research evaluation systems
e.g. UK's REF?

Data-Intensive Research Lifecycle



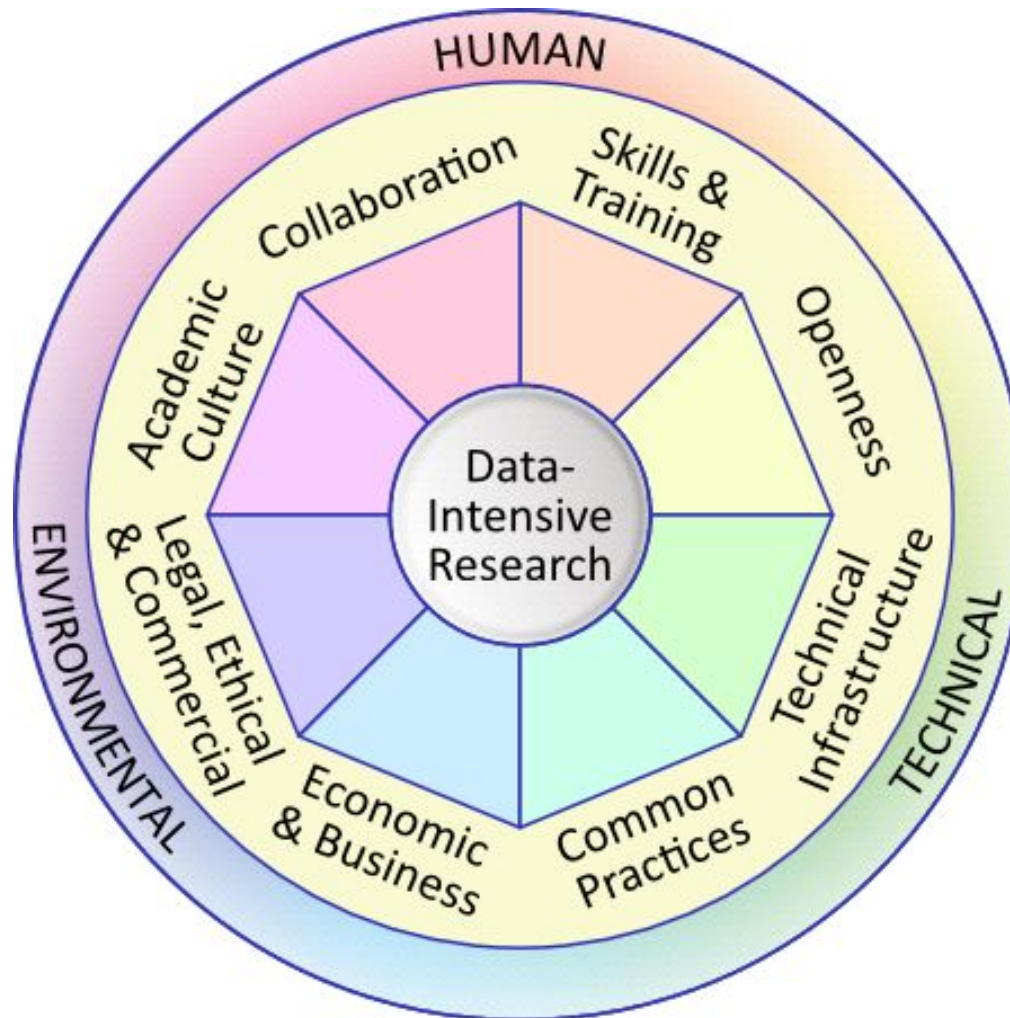
Areas that need particular attention

- Legal, ethical and commercial issues
 - IPR, privacy, sensitivity, licensing
- Gaining informed consent for reuse and repurposing
- Appraisal and quality control
 - Collection and acquisition policies, peer review
- Trustworthiness
 - Metadata, documentation, contextual information
- Scale and complexity of data
 - Workflows, methodologies, OAIS Representation Information
- Publication and sharing
 - Release policy, controlled access, indexing, interoperability
- Citation and attribution in scholarly communications
 - granularity, versioning, persistent identifiers

DIR Lifecycle Stages

| CDIR: Funder | Data Policy & Planning | Capture & Collection | Processing & Analysis | Data Curation | Publication & Sharing | Reuse & Impact |
|-----------------------------------|---------------------------|-------------------------|--------------------------|------------------|--------------------------|-------------------|
| Technical Infrastructure | | | | | | |
| Common Practice | | | | | | |
| Skills & Training | | | | | | |
| Openness | | | | | | |
| Academic Culture | | | | | | |
| Legal, Ethical & Commercial | | | | | | |
| Collaboration | | | | | | |
| Economic & Business Models | | | | | | |

CDIR Tool Online Demo



Review & Further Work

- Overlaps in parameters in CCMF
 - Common practice subsumed into Academic Culture (Funder)
 - Collaboration subsumed into Economic & Business Models (Funder)
 - Placing of some issues subjective
 - e.g. cultivating an academic culture of open access
- Tool enhancement
 - Need to add a backend database (multi-user, reports etc.)
 - Need to add user account management
 - Improvements to user interface
- Road testing of tool and checklists with Funders, Institutions & Researchers

Feedback from workshop delegates

- CDIR Tool Demo
<http://www.ukoln.ac.uk/projects/ccmdir/demo-1>
- Are we asking the right questions?
 - Do they need re-phrasing?
 - Is the terminology appropriate?
 - Are there any gaps?
- Comments on CCMF?
 - CCMF White Paper: <http://communitymodel.sharepoint.com>
- Comments on Data-Intensive Research Lifecycle?
 - Are there any important stages missing?
- Comments on user interface?

CCMDIR Project Team



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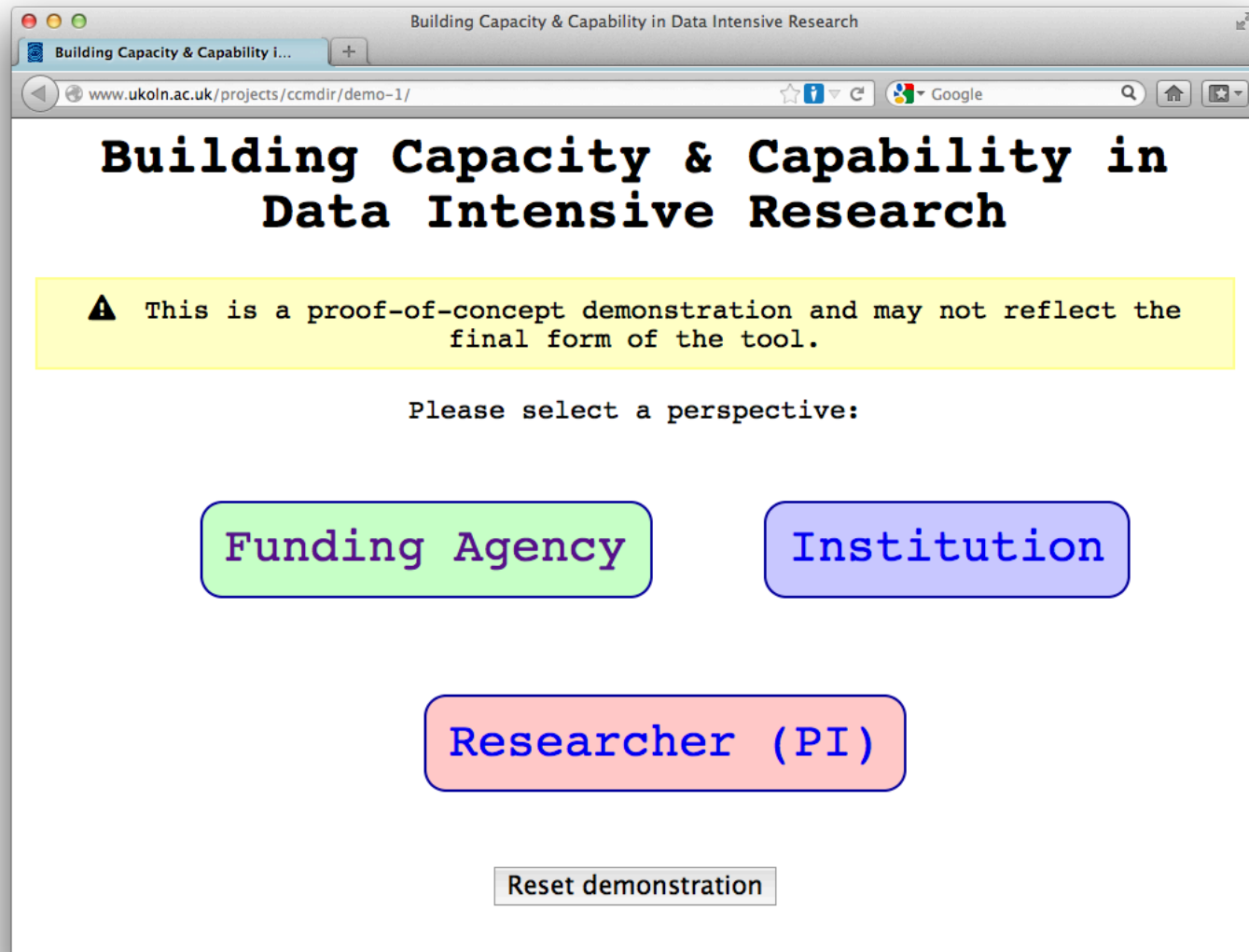
<http://communitymodel.sharepoint.com/>
<http://www.ukoln.ac.uk/projects/ccmdir/demo-1>



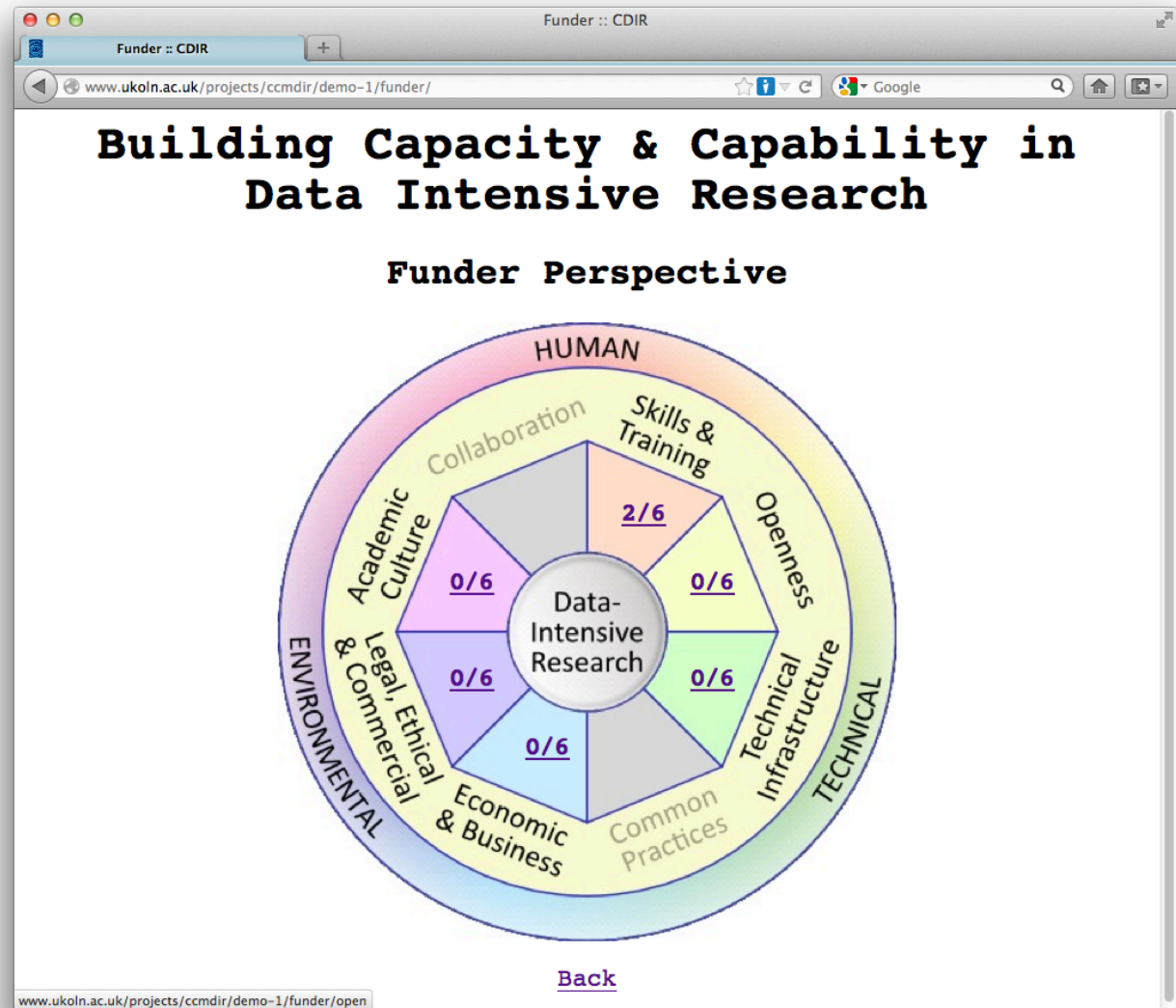
Screen shots ...

...in case of problems with online demo ...

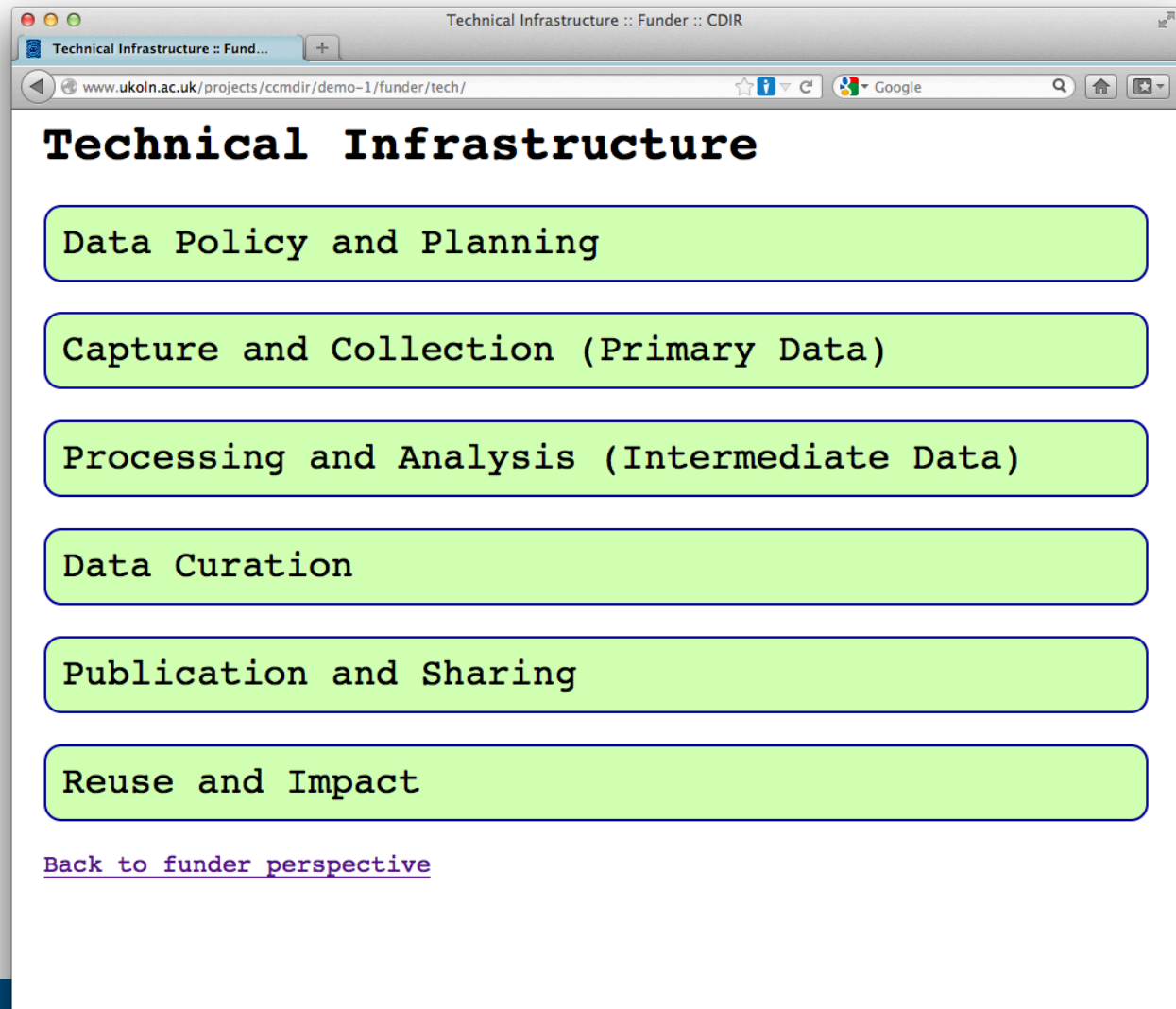
Three Perspectives



Funders Wheel



Funders: Technical Infrastructure (1)



Technical Infrastructure :: Funder :: CDIR

Technical Infrastructure :: Fund...

www.ukoln.ac.uk/projects/ccmdir/demo-1/funder/tech/

Google

Technical Infrastructure

- Data Policy and Planning
- Capture and Collection (Primary Data)
- Processing and Analysis (Intermediate Data)
- Data Curation
- Publication and Sharing
- Reuse and Impact

[Back to funder perspective](#)

Funders: Technical Infrastructure (2)

Technical Infrastructure :: Funder :: CDIR

www.ukoln.ac.uk/projects/ccmdir/demo-1/funder/tech/

Publication and Sharing

How does the agency support cross-searching of distributed research data?

How is interoperability between silos of research data promoted?

What facilities are funded for publication and sharing of research data? Are these facilities capable of making available other resources associated with research data? E.g. metadata, software, processing workflows, physical samples

Which file formats are endorsed when sharing data? Are these accepted as disciplinary best practice? Are they standards? Are they open?

Funders: Academic Culture

Academic Culture :: Funder :: CDIR

www.ukoln.ac.uk/projects/ccmdir/demo-1/funder/acad/

Google

Publication and Sharing

How is knowledge transfer encouraged within the sub-discipline/discipline?

How does the agency reward or recognise researchers for publishing and sharing research data?

How are researchers rewarded or recognised for making research data reusable?

Notes

Is there more to do in this area? Yes ▾

Funders: Business & Economic Models

Economic and Business Models :: Funder :: CDIR

www.ukoln.ac.uk/projects/ccmdir/demo-1/funder/econ/

Reuse and Impact

How does the agency foster collaborative agreements to reuse and repurpose research data? e.g. within the discipline; across disciplines with other funding bodies; across institutions and countries

With which sectors are there collaborative agreements and interactions? E.g. private, public, government etc.

How is involvement or collaboration with the public encouraged?

How does the agency realise the full value of data reuse? E.g. Are there plans to provide value-added services based on corpora of research data?